Alaska Department of Transportation & Public Facilities
Highway Analysis System

What is the Highway Analysis System?

The Highway Analysis System (HAS) is the Alaska Department of Transportation and Public Facilities' (ADOT&PF) interactive, menu-driven transportation database. HAS is a hierarchical mainframe database coded in the Natural programming language using ADABAS as the database manager. HAS provides for on-line and batch road network maintenance, inquiries, and reports. Access to batch reports, maintenance, and confidential information is user-id controlled.

There are three main components of the Highway Analysis System:

- ROADLOG
- Traffic Data System
- Accident Data System

ROADLOG defines the road network structure and is the basic building block of the Highway Analysis System. The Traffic Data System contains information about traffic volume, speed, classification, and turning movements. The Accident Data System contains detailed information about motor vehicle crashes.

What types of data are in the Highway Analysis System?

Road segments and nodes define the HAS road network structure. The most common node types are road intersections and dead ends. The roadway between two nodes is a road segment; in ROADLOG, a road consists of one or more road segments. Road segments have a from node, to node, direction, length, and other attributes including, but not limited to, the ADOT&PF region, census area, borough, city, functional classification, and maintenance responsibility.

ADOT&PF uses the Coordinated Data System (CDS) for its road naming convention. Each road has a route name (the CDS route number) and a route description (the posted road name). The HAS database contains CDS routes for:

- all state-maintained roads
- most non state-maintained roads that are functionally classified higher than a local road
- many non state-maintained roads that are functionally classified as a local road

The Highway Analysis System contains both point and linear features. If a feature can be described by a single location on the road network, it is treated as point data. Examples of point data are signs, traffic signals, traffic counting stations, culverts, bridges, and accidents. If an attribute can be described continuously with the same properties for a distance over 5 feet, then it is treated as line data. Examples of line data are guardrails, traffic links, shoulders, lanes, lane width, and bike paths.

How is data located on the road network?

The Highway Analysis System is a linear reference system represented by routes and route milepoints. Point and linear features are assigned a milepoint, or milepoint range, on a particular CDS route. For example, the locations of traditional milepost markers (point features) along a route are expressed in milepoints to the nearest 1/1000th of a mile from the beginning of the CDS route. Milepost markers are not used as a basis for the linear reference system because the markers are not always spaced a mile apart and often are missing.

ADOT&PF's Highway Database and GIS Mapping Sections are jointly conducting a multi-year highway inventory project. This project entails collecting differential global positioning system (DGPS) centerline coordinates and inventorying highway point and linear features for all state roads. The ROADLOG component of HAS is updated concurrent with the inventory project. HAS maintains current and historic records for the road network and the associated point and linear features. Historic road network data is available for most state maintained roads.

How do I get access to the Highway Analysis System?

The Highway Analysis System can be accessed via the Alaska Computer Network, which is available to all state agencies and other organizations with a link to the network. Contact the Alaska Department of Administration's Information Technology Group (ITG) Help Desk to establish an Alaska Computer Network (ACN) userid:

- Anchorage – (907) 269-5016
- Juneau - (907) 465-4801
- Fairbanks – (907) 451-5288
- Statewide – (800) 535-8886

The Highway Analysis System allows limited access to report programs using the following parameters:

- Transaction Identifier - NHAS
- Application ID - TWFDATA
- User Id – TWFREAD
- Password – PW

To obtain increased access to reports and other applications, contact:

Jack Stickel
(907) 465-6998 or
Tollfree @ 1-888-PLAN-DOT (752-6368)